

## First lab: Basic architecture of microservices

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**Github:** [https://github.com/khristinakokolus/microservices\\_architecture.git](https://github.com/khristinakokolus/microservices_architecture.git)

All code is in the *micro\_basics* branch.

### **POST:**

First POST request:

```
POST http://localhost:8080/facade_service
Content-Type: application/json

{"First message"}
###
```

First POST return:

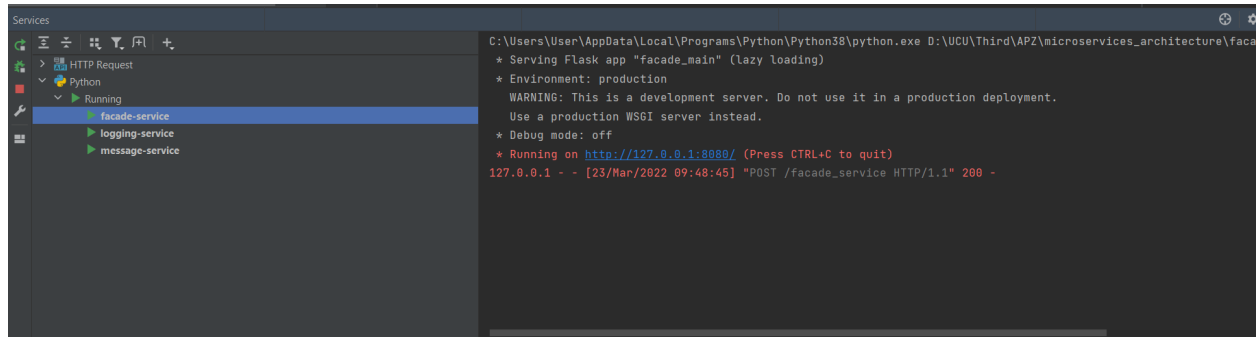
```
POST http://localhost:8080/facade_service

HTTP/1.0 200 OK
Content-Type: application/json
Content-Length: 19
Server: Werkzeug/1.0.1 Python/3.8.3
Date: Wed, 23 Mar 2022 07:48:45 GMT

{
  "statusCode": 200
}

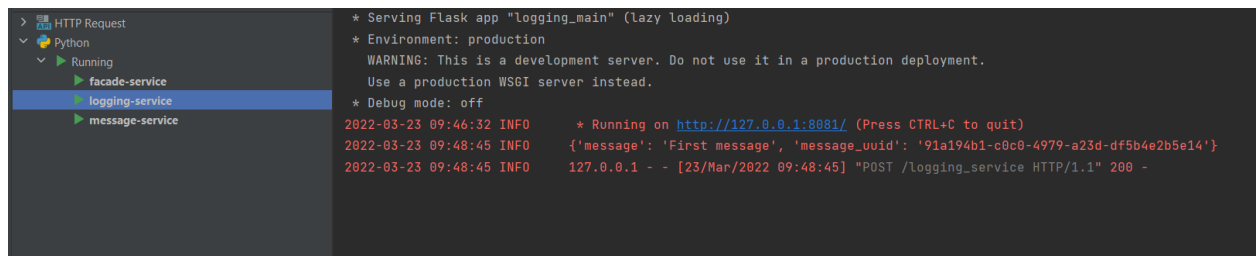
Response code: 200 (OK); Time: 2128ms; Content length: 19 bytes
```

## Facade service console:



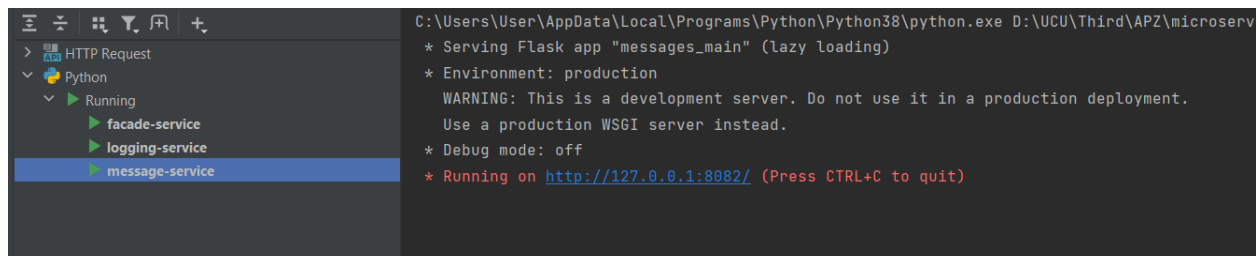
```
C:\Users\User\AppData\Local\Programs\Python\Python38\python.exe D:\UCU\Third\APZ\microservices_architecture\facade_service\main.py
* Serving Flask app "facade_main" (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:8080/ (Press CTRL+C to quit)
127.0.0.1 - - [23/Mar/2022 09:48:45] "POST /facade_service HTTP/1.1" 200 -
```

## Logging service console:



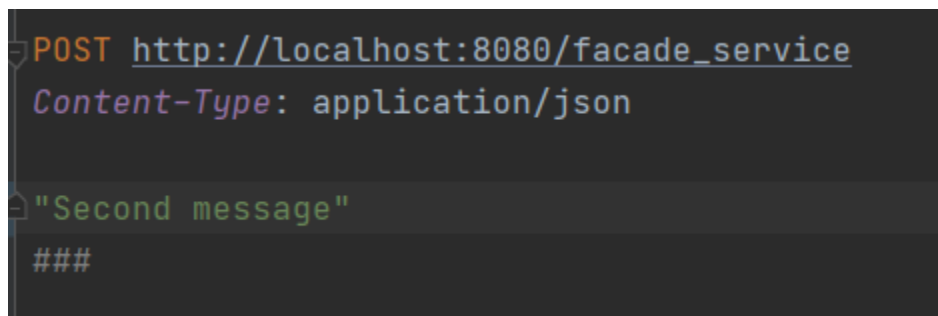
```
C:\Users\User\AppData\Local\Programs\Python\Python38\python.exe D:\UCU\Third\APZ\microservices_architecture\logging_service\main.py
* Serving Flask app "logging_main" (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
2022-03-23 09:46:32 INFO * Running on http://127.0.0.1:8081/ (Press CTRL+C to quit)
2022-03-23 09:48:45 INFO {'message': 'First message', 'message_uuid': '91a194b1-c0c0-4979-a23d-df5b4e2b5e14'}
2022-03-23 09:48:45 INFO 127.0.0.1 - - [23/Mar/2022 09:48:45] "POST /logging_service HTTP/1.1" 200 -
```

## Messages service console:



```
C:\Users\User\AppData\Local\Programs\Python\Python38\python.exe D:\UCU\Third\APZ\microservices_architecture\messages_service\main.py
* Serving Flask app "messages_main" (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:8082/ (Press CTRL+C to quit)
```

## Second POST request:



```
POST http://localhost:8080/facade_service
Content-Type: application/json

"Second message"

###
```

Second POST return:

```
POST http://localhost:8080/facade_service

HTTP/1.0 200 OK
Content-Type: application/json
Content-Length: 19
Server: Werkzeug/1.0.1 Python/3.8.3
Date: Wed, 23 Mar 2022 07:51:34 GMT

{
  "statusCode": 200
}

Response code: 200 (OK); Time: 2060ms; Content length: 19 bytes
```

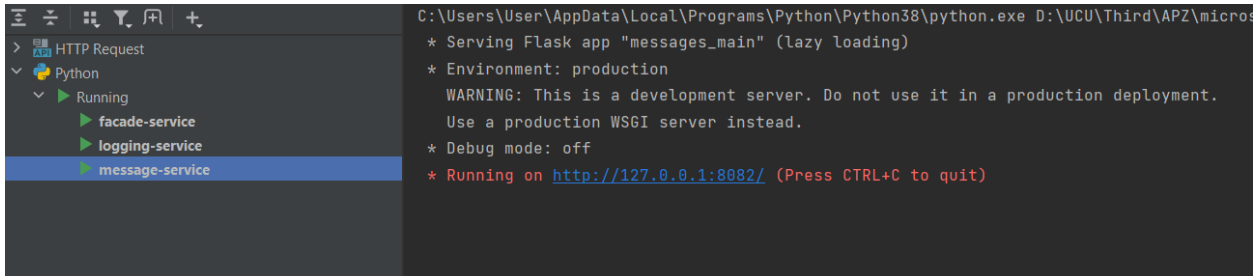
Facade service console:

```
C:\Users\User\AppData\Local\Programs\Python\Python38\python.exe D:\UCU\Third\APZ\microservices_architecture\facade-service
* Serving Flask app "facade_main" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:8080/ (Press CTRL+C to quit)
127.0.0.1 - - [23/Mar/2022 09:48:45] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [23/Mar/2022 09:51:34] "POST /facade_service HTTP/1.1" 200 -
```

Logging service console:

```
C:\Users\User\AppData\Local\Programs\Python\Python38\python.exe D:\UCU\Third\APZ\microservices_architecture\logging-service
* Serving Flask app "logging_main" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:8081/ (Press CTRL+C to quit)
2022-03-23 09:46:32 INFO {'message': 'First message', 'message_uuid': '91a194b1-c0c0-4979-a23d-df5b4e2b5e14'}
2022-03-23 09:48:45 INFO 127.0.0.1 - - [23/Mar/2022 09:48:45] "POST /logging_service HTTP/1.1" 200 -
2022-03-23 09:51:34 INFO {'message': 'Second message', 'message_uuid': 'a17029e2-3d6e-4248-bfe8-060a339495e4'}
2022-03-23 09:51:34 INFO 127.0.0.1 - - [23/Mar/2022 09:51:34] "POST /logging_service HTTP/1.1" 200 -
```

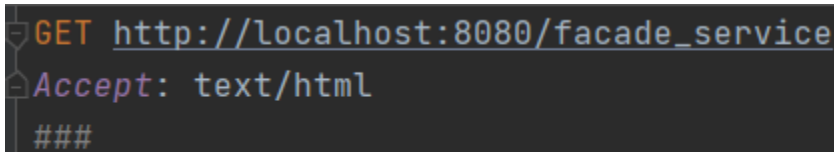
Messages service console:



```
C:\Users\User\AppData\Local\Programs\Python\Python38\python.exe D:\UCU\Third\AP2\micros
* Serving Flask app "messages_main" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:8082/ (Press CTRL+C to quit)
```

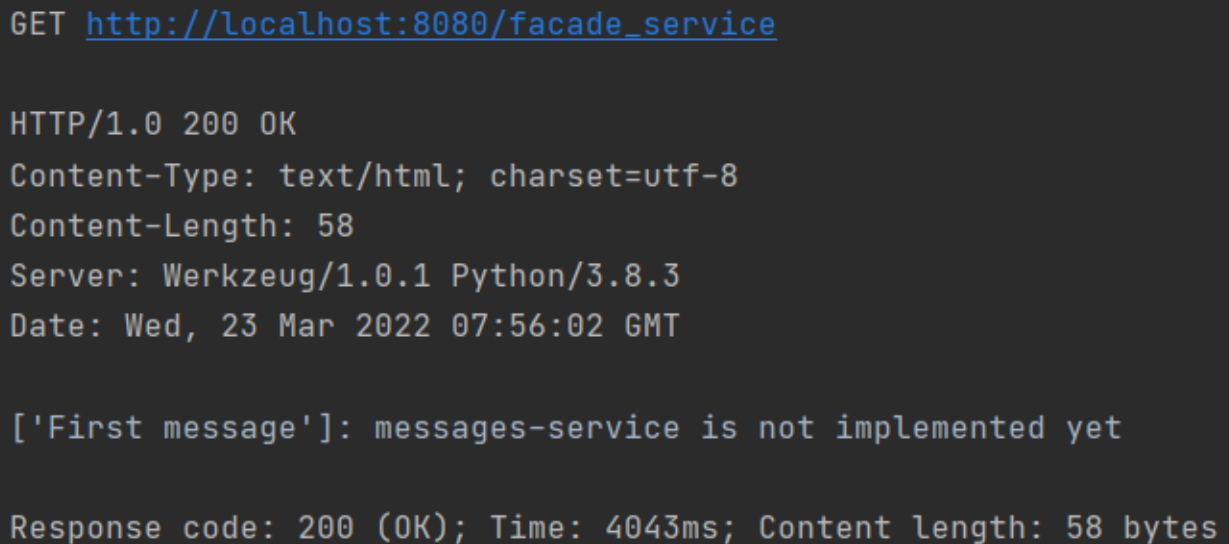
**GET:**

First GET request:



```
GET http://localhost:8080/facade_service
Accept: text/html
###
```

First GET return:



```
GET http://localhost:8080/facade_service

HTTP/1.0 200 OK
Content-Type: text/html; charset=utf-8
Content-Length: 58
Server: Werkzeug/1.0.1 Python/3.8.3
Date: Wed, 23 Mar 2022 07:56:02 GMT

['First message']: messages-service is not implemented yet

Response code: 200 (OK); Time: 4043ms; Content length: 58 bytes
```

## Facade service console:

```
C:\Users\User\AppData\Local\Programs\Python\Python38\python.exe D:/UCU/Thrd/APZ/microservices_archite
* Serving Flask app "facade_main" (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:8080/ (Press CTRL+C to quit)
127.0.0.1 - - [23/Mar/2022 09:55:54] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [23/Mar/2022 09:56:02] "GET /facade_service HTTP/1.1" 200 -
```

## Logging service console:

```
C:\Users\User\AppData\Local\Programs\Python\Python38\python.exe D:/UCU/Thrd/APZ/microservices_architecture/logging-s
2022-03-23 09:55:24 INFO      * Running on http://127.0.0.1:8081/ (Press CTRL+C to quit)
* Serving Flask app "logging_main" (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
2022-03-23 09:55:54 INFO      {'message': 'First message', 'message-uuid': '0a749acd-d012-4b9a-a011-82f372876305'}
2022-03-23 09:55:54 INFO      127.0.0.1 - - [23/Mar/2022 09:55:54] "POST /logging_service HTTP/1.1" 200 -
2022-03-23 09:56:00 INFO      127.0.0.1 - - [23/Mar/2022 09:56:00] "GET /logging_service HTTP/1.1" 200 -
```

## Messages service console:

```
C:\Users\User\AppData\Local\Programs\Python\Python38\python.exe D:/UCU/Thrd/APZ/mic
* Serving Flask app "messages_main" (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:8082/ (Press CTRL+C to quit)
127.0.0.1 - - [23/Mar/2022 09:56:02] "GET /message_service HTTP/1.1" 200 -
```

Second GET return with two messages:

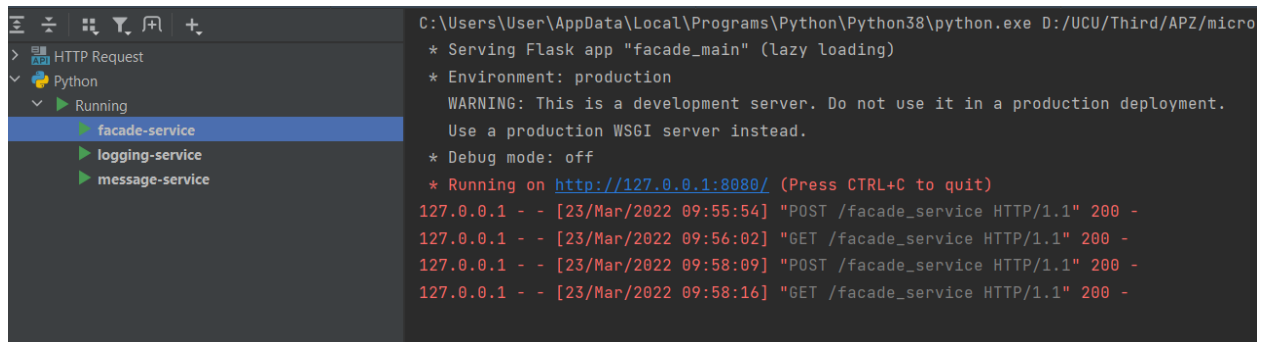
```
GET http://localhost:8080/facade_service

HTTP/1.0 200 OK
Content-Type: text/html; charset=utf-8
Content-Length: 76
Server: Werkzeug/1.0.1 Python/3.8.3
Date: Wed, 23 Mar 2022 07:58:16 GMT

['Second message', 'First message']: messages-service is not implemented yet

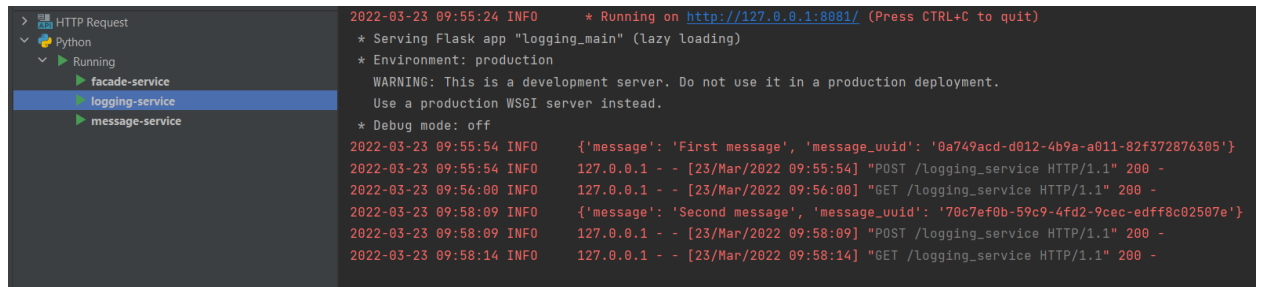
Response code: 200 (OK); Time: 4054ms; Content length: 76 bytes
```

Facade service console:



```
C:\Users\User\AppData\Local\Programs\Python\Python38\python.exe D:/UCU/Third/APZ/micro
* Serving Flask app "facade_main" (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:8080/ (Press CTRL+C to quit)
127.0.0.1 - - [23/Mar/2022 09:55:54] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [23/Mar/2022 09:56:02] "GET /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [23/Mar/2022 09:58:09] "POST /facade_service HTTP/1.1" 200 -
127.0.0.1 - - [23/Mar/2022 09:58:16] "GET /facade_service HTTP/1.1" 200 -
```

Logging service console:



```
2022-03-23 09:55:24 INFO * Running on http://127.0.0.1:8081/ (Press CTRL+C to quit)
* Serving Flask app "logging_main" (lazy loading)
* Environment: production
WARNING: This is a development server. Do not use it in a production deployment.
Use a production WSGI server instead.
* Debug mode: off
2022-03-23 09:55:54 INFO {'message': 'First message', 'message_uuid': '0a749acd-d012-4b9a-a011-82f372876305'}
2022-03-23 09:55:54 INFO 127.0.0.1 - - [23/Mar/2022 09:55:54] "POST /logging_service HTTP/1.1" 200 -
2022-03-23 09:56:00 INFO 127.0.0.1 - - [23/Mar/2022 09:56:00] "GET /logging_service HTTP/1.1" 200 -
2022-03-23 09:58:09 INFO {'message': 'Second message', 'message_uuid': '70c7ef0b-59c9-4fd2-9cec-edff8c02507e'}
2022-03-23 09:58:09 INFO 127.0.0.1 - - [23/Mar/2022 09:58:09] "POST /logging_service HTTP/1.1" 200 -
2022-03-23 09:58:14 INFO 127.0.0.1 - - [23/Mar/2022 09:58:14] "GET /logging_service HTTP/1.1" 200 -
```

## Messages service console:

```
> HTTP Request
  Python
    Running
      facade-service
      logging-service
      message-service

* Serving Flask app "messages_main" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:8082/ (Press CTRL+C to quit)
127.0.0.1 - - [23/Mar/2022 09:56:02] "GET /message_service HTTP/1.1" 200 -
127.0.0.1 - - [23/Mar/2022 09:58:16] "GET /message_service HTTP/1.1" 200 -
```